A NEW GENUS AND SPECIES OF HAWK MOTH (LEPIDOPTERA: SPHINGIDAE) FROM PAPUA NEW GUINEA

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Abstract

Altijuba oktediensis gen. et sp. nov. is described from a single female from Tabubil, Western Province, Papua New Guinea.

Introduction

An undescribed genus and species of hawk moth was collected at Tabubil in the mountains of Western Province, Papua New Guinea, in May 1993. This new taxon is distinct from all genera previously recorded from Papua New Guinea and West Irian.

Altijuba gen. nov.

(Figs 1-3)

Type species. *Altijuba oktediensis* sp. nov.

Description. Antenna short, filiform except for terminal segments which gradually taper; weakly hooked. Eyes small in relation to overall size. Palps not large but erect, closely appressed to head. Head and thorax with distinct medial scale crest. Abdomen very short and stout, tapering abruptly.

Middle tibia with one pair and hind tibia with two pairs of small spurs. Hind legs short. Coxae densely covered with long hair scales. Fore femur covered by shorter, flattened scales. Hind femur with distinctive thin crest of long scales on ventral surface. Distal half of tibia with triangular shaped crest of long scales on dorsal surface. All legs narrow and of thread-like appearance.

Forewing costa straight with apex of wing falcate; termen almost straight from R_5 to M_3, serrate and angled inwards from M_3 to tornus; distal edge of inner margin at tornus bluntly tooth-like; two prominent cream stigmata visible on upperside at end of discal cell, one above the other; only one prominent stigmata visible on underside. Hindwing with apex rounded to Rs vein; termen slanting inwards but almost straight from Rs to M_3, then serrate to 1A+2A; tornus with tooth-like projection.

Etymology. The generic name *Altijuba* is derived from the Latin words 'altus' meaning high and 'juba' meaning mane or crest.

Altijuba oktediensis sp. nov.

(Figs 1-3)

Type. *Holotype* ♀, PAPUA NEW GUINEA: Tabubil, Western Province, 5°15'S 141°13'E, 650 m, 11.v.1993, R.B. Lachlan. Holotype in Australian National Insect Collection, CSIRO, Canberra.

Figs 1-2. *Altijuba oktediensis* gen. et sp. nov., holotype female. (1) upperside, legs reset for examination; (2) underside.

Description. Female (Figs 1-3). Forewing length 41 mm. Antenna light brown and filiform. Palpi grey-brown above, contrasting orange-brown below. Small cream spot below and slightly forward of each eye. Head, thorax and abdomen uniform grey-brown on upper surface. Head and thorax with dark brown, longitudinal, medial crest. Underside of thorax with dense, orange-brown pilosity. Single, dark brown, transverse line on posterior edge of upperside of third abdominal segment. Proximal end of all tibiae with cream spot on dorsal surface. Underside of abdomen orange-brown with distinct sheen and three thin, disconnected, brown longitudinal medial lines; each segment with mauve and brown posterior edge.

Fig. 3. *Altijuba oktediensis* gen. et sp. nov., holotype female at rest.

Forewing upperside pattern as in Fig. 1; ground colour dark brown with lighter markings. Dark brown apical band. Thin, dark brown, postmedian line pointed outwards along veins R_5 to M_3 and 1A+2A. Two dark brown lines beginning at submedian and postmedian areas of costa, curving inwards and joining at inner margin one third of length from base and enclosing a dark, triangular patch. Two prominent cream stigmata, one above the other, at end of discal cell. Three simple brown fasciae between subbasal and submedian areas. Underside with single, strongly visible stigma. Basal and subcostal areas grey-brown. Postmedian area lighter brown. Single thin brown median band from R_4 curving inwardly to CuA_2. Single serrate, thin brown postmedian line from R_5 to CuA_2. Subapical area dark brown with diffuse black and orange scaling. Light mauve subterminal band, straight to M_3, inner edge of band serrate proximally above veins CuA_1, CuA_2 and 1A+2A.

Hindwing upperside with dark brown ground colour. Thin, orange-brown apical and terminal band to M_3. Dark, pink-brown band with thin black anterior and posterior lines from just above vein CuA_1 to inner margin above tornus distally. Underside with ground colour orange-brown, pink basally. Dark grey along costa, lighter grey in anal area tending light brown towards tornus. Small faint stigma at end of cell. One straight, thin, dark brown transverse median line from vein $Sc+R_1$ to CuA_2. Two thin, faint, serrate, parallel postmedian lines terminating above tornus. Broad mauve terminal band from apex to vein CuA_2, serrate proximally between veins M_3 and CuA_2.

Male. Unknown.

Distribution. Western Province, Papua New Guinea.

Etymology. The specific name *oktediensis* is derived from the Ok Tedi river, which flows past the mining town of Tabubil, the only known locality for the species.

Discussion

As the only known specimen is a female, the genitalia have not been examined. External characters have been used to characterize the genus and to determine where it probably belongs. When males become available the genitalia will provide further clues as to its placement. Neither Mackey (1975) nor D'Abrera [1987] illustrated any species that closely resemble this specimen. It was first noted as an unidentified species by Moulds and Lachlan (1998). The forewing shape resembles *Eurypteryx* Felder and *Gehlenia* Bryk but is more serrate. The hindwing shape also has some resemblance to *E. falcata* Gehlen but is also more serrate. The two stigmata on the forewing upperside of *A. oktediensis* are a prominent feature and are also found, to a lesser degree, on *E. shelfordi* Rothschild & Jordan. However, no species of *Eurypteryx* has the orange-brown underside to the hindwings and abdomen seen on the new species. Also, *Altijuba* has very small eyes and short palps which do not project as they do in *Eurypteryx* and *Acosmeryx* Boisduval.

Dr Ian Kitching (personal communication) has examined photographs of the holotype and is of the opinion that the new genus is probably closely related to *Eurypteryx* and may well be somewhat sexually dimorphic, with the male being more uniform in colour and with smaller stigmata. A distinctive feature of this new species is the unusually short, stout abdomen, similar to the African sphingid *Dovania poecila* Rothschild & Jordan. The vast majority of world Sphingidae have a much longer abdomen in both sexes. The crest on the head and thorax of *Altijuba* is similar to that in *Gehlenia*. The orange-brown underside of the hindwing is also common to some *Acosmeryx* species but *Altijuba* differs from these in the shape of both wings. The leg scaling is another distinctive feature of *Altijuba*.

This new species has a number of characters found in several different genera as well as its own distinctive features. It cannot be placed in a currently described genus and is therefore placed in a new genus on its own.

Despite over three years of comprehensive collecting between 1991-93 and in March-April 1994, at several sites in and around the Tabubil region, only a single specimen of this species was collected. During this time thousands of specimens, covering 66 species and 20 genera, were either sighted, examined or collected (Moulds and Lachlan 1998). Dr Kitching has suggested that if *Altijuba* is related to *Eurypteryx* this may explain its rarity as it is well known that *Eurypteryx* species do not readily come to light.

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